

Computer Science 20 Number Systems Worksheet

Convert each of the following decimal (base 10) number representations to a binary (base 2) representation.

- a) 5 b) 15 c) 32 d) 65
e) 127 f) 1024 g) 2047 h) 129

Convert each of the following binary (base 2) number representations to a decimal (base 10) representation.

- a) 1001 b) 1101 c) 100001 d) 111111
e) 100100 f) 101010 g) 1000000 h) 11101110

Convert each of the following decimal (base 10) number representations to an octal (base 8) representation.

- a) 5 b) 15 c) 32 d) 65
e) 127 f) 1024 g) 2047 h) 129

Convert each of the following octal (base 8) number representations to a decimal (base 10) representation.

- a) 102235 b) 16 c) 47 d) 70452 e) 177776

Convert each of the following hexadecimal (base 16) number representations to a decimal (base 10) representation.

- a) 1F b) E2 c) F1 d) ABCD e) 1FFE

Convert each of the following binary (base 2) number representations to an octal (base 8) representation.

- a) 1001 b) 1101 c) 100001 d) 111111
e) 100100 f) 101010 g) 1000000 h) 11101110

Convert each of the following octal (base 8) number representations to a hexadecimal (base 16) representation:

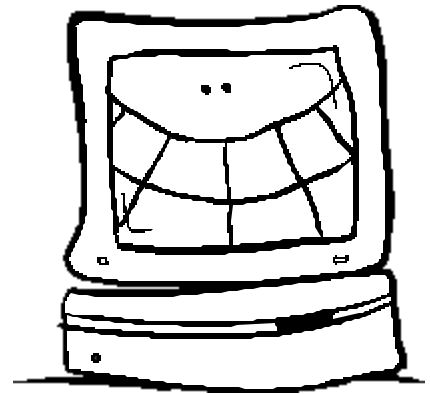
- a) 747 b) 228

Computer Talk....

Classic ANAGRAMS date back over a hundred years. They are a REARRANGEMENT of the letters of a word or phrase to make a different but RELATED word or phrase.

When asked to describe its job, the computer stated that it was..

“To scan a visible star or moon”



- Rearrange the letters to find out what the computer did.
- Check yourself by finding the value of the binary number.
- Fill in the letter above its corresponding value as a standard numeral.

CONVERT TO STANDARD NUMERALS:

11001 - T	10101 - A	1001 - L	101 - O
11 - O	11111 - V	100001 - E	1000 - R
11101 - S	101000 - I	10111 - S	100000 - M
10001 - C	11000 - S	11011 - T	100011 - O
10 - A	111 - I	110 - A	1110 - O
1010 - N	1011 - B	100 - R	1111 - N

3	11	29	33	4	31	21	25	7	5	10	23

2	24	27	8	14	15	35	32	40	17	6	9